

H. Guidelines for management of adverse reactions during and after thyroid FNA

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H. Guidelines for management of adverse reactions during and after thyroid FNA: **Review**

- Multiple literature sources reporting on vast clinical experience in thyroid FNA describe thyroid FNA as being very well tolerated with the incidence of complications increases with increasing needle size.
- For superficial fine needle aspiration minor complications similar to blood drawing occur and are typically restricted to local pain and slight ecchymosis which can be treated with an ice pack and Non-aspirin pain relievers

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■ Hematoma

- Small asymptomatic hematomas are common and resolve without treatment.
- For FNA of deep lesions, those using large bore needles (>23 gauge), and patients on ASA direct pressure to the biopsy site after biopsy is also recommended for several minutes and a post-procedure observation of at least 30 minutes is recommended.

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■ *Vasovagal Reactions*

- Vasovagal reactions can be dramatic but are not equivalent to seizure activity
- Best to avoid by asking as to past procedural reactions and reassurance
- FNA in reclined chair to avoid fall
- Ammonia inhaler taped to back of chair for easy access, cold compress to the forehead, juice or soda is also helpful. In most instances, the reaction lasts only 2-3 minutes. Pulse and bp prior to discharge.

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■ Vasovagal Reactions

- Must take into account patient age and co-morbid conditions
 - If elderly, with co-morbid conditions, prolonged vasovagal symptoms
 - Consider medical evaluation despite symptomatic resolution

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■ Vasovagal Reactions

- MD performing a procedure
 - It is incumbent upon the clinician to provide appropriate clinical care and backup, even for this relatively minor procedure.

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■ Vasovagal Reactions

- At MEEI:
 - “noninvasive procedures”-ekg,IV, phlebotomy
 - “invasive procedures”-LP, biopsy(FNA)
- Requirements of staff and hospital setting
 - Provider must be CPR-BCLS trained
 - Code team available
 - Hospital environment:-JCHO national patient safety goals
 - -OSHA guidelines re: blood borne pathogens and material handling

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■ Infection

- Infection is an uncommon complication of FNA even in patients with immunocompromise.
 - infection should be considered in patients with preexisting thyroid abnormalities (especially cysts), patients with local (ex. atopic dermatitis) or systemic immunocompetence issues.
- In above setting or with poor skin hygiene, iodine prep rather than the standard alcohol swab should be considered

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■ Recurrent laryngeal nerve paralysis

- Although feared, the complication of RLN paralysis, which is manifest by paralytic dysphonia and dysphasia, is rare (<0.036%). Voice change would typically occur with 1-2 day delay and is in part the rationale for postop procedure information sheet with a contact number.

■ Tumor seeding

- This complication is exceedingly rare for thyroid FNAs though not zero. Strict adherence to standard FNA procedure including release of suction with needle removal, and use of an appropriate small gauge needle, must be assumed.

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■ Post procedure guidelines

- An empiric 30 minute observation period post procedure to observe for progressive swelling and ecchymosis has been advocated.
- An information sheet should be given to all patients reviewing the expected minor discomfort, ecchymosis with advise to seek medical attention should sudden rapid swelling or unrelenting pain is recommended and should include an emergency contact.
- It is of note that the rare clinical events (i.e. hematoma, infection, RLN paralysis) with onset of several hours to days after the procedure.

H. Guidelines for management of adverse reactions during and after thyroid FNA: **Controversies**

None- no postings

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Discussion

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Conclusions

- 1. Cold packs and Tylenol are recommended for pain at the biopsy site.
- 2. Apply direct pressure to the biopsy site to reduce the potential for bruising and hematoma.
- 3. Alcohol cleansing of the skin is adequate for simple, palpable biopsy. Unclean skin, or biopsies of deep sites warrants iodine skin prep to reduce the risk of infection.
- 4. Reduce excessive number of biopsies and aggressive biopsy technique of cystic thyroid nodule to reduce the risk of cyst fluid leakage into the neck.
- 5. Utilize a 23 gauge needle or smaller to reduce the risk of tumor track seeding.
- 6. Written post-procedural guidelines with an emergency number is recommended.